

ZAPOL'SKIY, K. K.

ZAPOL'SKIY, K. K. -- "Apparatus and Methods of Investigation of the Physical Characteristics of Seismic Waves in Real Mediums." Sub 18 Jun 52, Geophysics Inst, Acad Sci USSR. (Dissertation for the Degree of Candidate in Physicomathematical Sciences).

SO: Vechernaya Moskva January-December 1952

ZAPOL'SKIY, K. K.

USSR/Geophysics- Diss ertations

Jan/Feb 53

"Four Candidates' Dissertations, Defended at Sessions of the Scientific Council of the Geophysics Institute, Academy of Sciences, USSR, in 1952"

"Iz Ak Nauk SSSR, Ser G geofiz" No 1, p 96

N. A. Vvedenskaya defended "Investigation of Deep Earthquakes in Central Asia" before Dr Phys-Math Sci V. F. Bonchkovskiy, and Cand Phys-Math Sci Ye. A. Koridalin on 11 Jun 52. K. K. Zapol'skiy defended "Apparatus and Procedure for Studying Physical Peculiarities of Seismic Waves in Real Mediums" before Dr Phys-Math Sci Ye. F. Savarenok, Cand Phys-Math Sci A. N. Epinat'yeva, and Cand Phys-Math Sci Ye. V. Karus on 18 Jun 52. D. N. Kvakin defended "Modeling of Micro-and Macrostructure of Waves in Non-homogeneous Media" before Dr Phys-Math Sci V. F. Bonchkovskiy, and Cand Phys-Math Sci V. I. Keylis-Borok on 31 Dec 52. M. L. Chelishvili defended "Magnetic Field of Models of Geological Structures" before Dr. Phys-Math Sci A. G. Kalashnikov, and Cand Phys-Math Sci G. N. Petrova on 28 May 52.

PA 241841

**ZAPOL'SKIY, K. K.**

USSR/Geophysics - Seismology

FD-1730

Card 1/1      Pub 45-2/18

Author : Zapol'skiy, K. K.

Title : Dynamic hodographs of seismic waves

Periodical : Izv. AN SSSR, Ser. geofiz. 198-206, May-Jun 1955

Abstract : The author describes a method for constructing dynamic hodographs which are a combination of kinematic hodographs and amplitudinal curves. He presents illustrations of the application of the dynamic hodographs in the correlation of waves and in the study of their characteristics of propagation. Examples are given of dynamic hodographs of main (head) and surface waves, constructed in connection with an investigation of small depths by means of shocks. Eleven references, USSR; e.g. G. A. Gamburtsev, "Correlational methods of studying earthquakes," DAN SSSR, 92, No 2, 1953.

Institution: Geophysical Institute, Academy of Sciences USSR

Submitted : May 4, 1954

ZAPOL'SKIY, K.K.

SEISMOLOGY

AUTHORS: Zapol'skii, K. K., Gal'perin, E. I., and Borinovich, E. S.  
TITLE: Mobile Low-Frequency Seismic Station  
PERIODICAL: Trudy Geofizicheskogo Instituta, Akademiia Nauk SSSR, 1955,  
No. 29(196), pp 3-10  
AVAILABLE: Original W/F Safe

February 24, 1956

RF/GW:rd

EE JH

S/169/61/000/010/009/053  
D228/D304

AUTHORS: Bune, V. I., Gzovskiy, M. V., ~~Zapol'skiy, K. K.~~  
Keylis-Borok, V. I., Krestnikov, V. N., Malinovskaya,  
L. N., Nersesov, I. L., Pavlova, G. I., Rautian, T. G.,  
Reysner, G. I., Riznichenko, Yu. V., and Khalturin, V. I.

TITLE: Methods of the detailed study of seismicity

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 10, 1961, 12-13,  
abstract 10A144 (Tr. In-ta fiz. Zemli AN SSSR, no. 9,  
1960, 327 p.)

TEXT: The Tadzhik complex seismologic expedition was organized with  
the aim of studying the nature of earthquakes and the conditions of their  
genesis. The most seismically-active zones of the USSR (Garm and Stalina-  
bad) were chosen as the work areas. The specific conditions of working  
and processing the data demanded the development of special systems of ob-  
servation and methods of interpretation. The large amount of recorded

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seismic phenomena permitted the use of statistical methods for studying their distribution in space and time; these methods, in their turn, provided the basis for introducing the quantitative indices of the seismicity characteristics of the seismically-active areas. The actual seismic observations were closely coordinated with geologic investigations, and this provided the possibility of exposing the tectonic basis of the seismic phenomena. A general review of the work area is given in Chapter 1, and concise data on major earthquakes are cited together with the general position of the expedition stations. A description of the standard main and auxiliary apparatus used at the stations, and also the layout and description of newly developed equipment--including an automatic seismic station with a magnetic memory--is cited in Chapter 2. The methods developed and utilized in the expedition for studying the crust's structure in the area under investigation from the records of nearby earthquakes are described in Chapter 3. Horizontal and vertical hodographs were constructed. The resulting material enabled the crust to be represented as a one-layer mass

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with a longitudinal-wave velocity of 6.0 - 6.1 km/sec. At the Mohorovicic boundary, the velocity suddenly changes to 8.0 km/sec. and then somewhat decreases, but at a depth of 300 km it subsequently increases to 9.2 km/sec. These data underlay the construction of isochrone charts used to localize the epicenters and to determine the focal depths. The isochrone charts were constructed with an account of the heterogeneity of the work area's geologic structure and the peculiarity of the seismic stations' location. This enabled the precision of hypocenter localization to be substantially increased, reducing it to 1 - 2 km at the center of the work area's topographic map. In Chapter 4, the definition of the concept of seismic energy at the focus is given, and the basic formulas are derived for its calculation. On the basis of experimentally obtained laws for the dying out of energy with distance, nomographs were constructed to determine practically the energy at the focus from the records of nearby earthquakes. Appraisal of the precision of calculation of the energy in relation to different factors shows that it may be determined accurately to the order of its magnitude. In this connection, the value  $K = \lg E_j$ .

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is introduced for characterizing the energy class of earthquakes. The value of  $K$  is compared with the earthquake magnitude  $M$ . The study of the iso-energy lines shows that the different degrees of the dying out of seismic energy along and across the strike of geologic structures exert a decisive influence on the form of the isoseisms. In Chapter 5, the frequencies of seismic vibrations are studied--in relation to the earthquake energy, the distance from the source, the geologic conditions at the point of observation and at the hypocenter, etc.--from recordings at both the customary stations and a special WCC (ChISS) seismic-station intended for frequency analysis of seismic waves directly at their place of registration. A detailed description is given for the frequency-selective seismic-station WCC-1954 (ChISS-1954) and for the results of the investigation of its recordings. Certain epicentral zones with an anomalous frequency are thereby revealed. The procedure for theoretically calculating the focal characteristics, and also for appraising these latter from empirical data, is given in Chapter 6. Several formulas are

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Methods of the detailed...

cited for determining the size of a focus in relation to its energy on the basis of different physical propositions. The dynamic parameters of the foci are determined; there appear to be definite predominant directions for both the strike and dip of the fracture planes. The characteristics of the seismic conditions of the Garm and Stalinabad seismically-active regions--both as a whole and in individual areas--are quoted together with the variations in the parameters of the conditions in time. The quantitative expression of the seismicity during constant seismic conditions is determined by the seismic activity. The possibility is shown of constructing graphs of the recurrence of earthquakes from short observations of weak shocks, and methods are given for determining the period required to obtain the parameters of the seismic conditions with a pre-set precision in relation to the energy of the recorded earthquakes. The statistical constancy of the seismic conditions is determined by the so-called measure of dispersion of the frequency of earthquakes. A brief description of the area's stratigraphy and the history of its geologic development is given in Chapter 8. The structural schemes and descriptions of the most important

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deep faults are cited. The contemporary structure of the Garma area is depicted as two main regions: the alpine geosynclinal zone in the south and the activated epi-Hercynian platform in the north. In section, it is drawn as several steps of Paleozoic basement adjoining each other along deep faults. A comparison of the seismicity with the tectonics of the study areas is made in Chapter 9. The construction of maps of isolines of seismic activity and gradients of the rate of tectonic movements is recommended for appraising the connection between the seismicity and the tectonics. Methods are cited for constructing such maps. The congruence between these magnitudes is established for the regions under investigation, and areas with the maximum gradient values correspond to those with the highest values of seismic activity. 272 references. [Abstracter's note: Complete translation.]

Card 6/6

ZAROLSKIY, K.K.

Abstracts and SCOR. Institut Field Zent

PAGE 1 BOOK INFORMATION

507/5534

Voprosy inzhenernoy seismologii, vyp. 3 (Problems in Engineering Seismology, No. 3) Moscow, 1960. 191 p. 1,700 copies printed. (Series: Izv. Vsesoy. na. 10 (117))

Ref. Eds.: B.V. Medvedev, Doctor of Technical Sciences, and A.G. Kalya, Candidate of Technical Sciences; Ed. of Publishing House: L.K. Nikolayev; Serb. Ed.: P.D. Krasina.

REPORT: This book is intended for seismologists, and engineers concerned with the construction of earthquake-resistant buildings.

CONTENTS: This is a collection of 15 articles by different authors on problems of engineering seismology. Individual articles discuss the effects of quakes on various structures; seismic activity in the Soviet Union, Kamay's Polymers, and Polyvinylalcohol; seismic activity and ground vibrations during strong earthquakes; the effects of quakes on the stability of buildings; the effects of quakes on buildings located 1000 m away. 30 personalities are mentioned. Each article is accompanied by references.

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ATC/USA: Library of Congress

Card 1/1

20/Jan/61  
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14

SHELYGIN, L.A., inzh.; ZAPOL'SKIY, M.V., inzh.

The UPT-3 experimental peat-harvesting machine. Torf. prom. no.1:  
23-26 '58. (MIRA 12:12)

1.Zavod Ivtorf mash.

(Peat machinery)

ZAPOL'SKIY, M.V.

New TE-3 peat excavator. Torf. prom. 38 no.5:37-38 '61.  
(MIRA 14:10)

(Excavating machinery)  
(Peat machinery)

ZAPOL'SKIY, M.V., inzh.

PMT-1 bucket loader. Torf. prom. 35 no.6:12-14 '58. (MIRA 11:10)

1.Ivanovskiy zavod torfyanogo mashinostroyeniya Ivanovskogo sovna-  
khoza.

(Loading and unloading)

ZAPOL'SKIY, N., kand.tekhn.nauk

Industrial steeling device. Rech. transp. 20 no.11:39-40 W '61.  
(MIRA 15:1)

(Ships---Maintenance and repair)

16.6500

32481  
S/044/61/000/010/050/051  
C111/C222

AUTHOR: Zapol'skiy, N.K.

TITLE: Graphical methods for the determination of some definite integrals appearing in technical calculations

PERIODICAL: Referativnyy zhurnal. Matematika, no. 10, 1961, 51-52, abstract 10 V 306. ("Nauchn. zap. Odessk. politekhn. in-t", 1960, 27, 59-68) X

TEXT: The author describes the well-known method due to Neyl's for the graphical construction of curves  $F(x) = y \cdot x^n$  ( $n$  -- positive integer,  $\varphi = y(x)$  -- given curve) the planimentering of which is equivalent to the mechanic calculation of the integrals

$$\oint y \cdot x^n dx ,$$

which express the moments of the plane cuts. Furthermore the author proposes analogous methods for the graphical construction of the curves  $y/x$ ,  $y_1 \cdot y_2$ ,  $y_2/y_1$ . The author considers examples for the application

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Graphical methods for the determination ...C111/C222

of the described methods for the solution of some concrete problems  
of technical mechanics.

[Abstracter's note : Complete translation.]

Card 2/2

ZAPOL'SKIY, N.N.

Calculation of crane booms. Nauch. zap. Od. politekh. inst. 41:  
40-50 '62. (MIRA 17:4)

ZAPOL'SKIY, Nikolay Vasil'yevich, kand.tekhn.nauk; SHELUCHENKO, V.M.,  
red.; VOLCHOK, K.H., tekhn.red.

[Wear and reconditioning of parts of internal-combustion marine  
engines] Iznos i vosstanovleniye detalei sudovykh dvigatelei  
vnutrennego sgoraniya. Leningrad, Leningr.otd., 1960. 134 p.  
(MIRA 13:12)  
(Marine diesel engines--Maintenance and repair)

ZAP()L'SKIY, N.V., kandidat tekhnicheskikh nauk.

Repairing ships of the "Bel'shaia Volga" and "Krasnoe Sernovo"  
type by method of standardized parts. Rech. transp. 15 no.2:  
14-16 # '56. (MLRA 9:6)  
(Ships--Maintenance and repair)

ZAPOL'SKIY, Nikolay Vasil'yevich, kand.tekhn.nauk; CHERKEZ, M.B.,  
kand.tekhn.nauk, red.; VASIL'YEV, Yu.A., red.izd-va;  
GVIRTIS, V.L., tekhn.red.

[Reconditioning and hardening parts by iron plating on  
automatically controlled equipment] Vosstanovlenie i  
uprochnenie detalei ostalivaniem na avtomatizirovannoi  
ustanovke. Leningrad, 1961. 29 p. (Leningradskii dom  
nauchno-tekhnicheskoi propagandy. Otmen peredovym opytom.  
Seria: Zashchitnye pokrytiia metallov, no.15).

(MIRA 15:4)

(Iron plating)

L 25667-66 FWT(d)/FMT(m)/FNP(f)/T DJ  
ACC NR: AM6010191 Monograph

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58  
50  
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Zapol'skiy, Nikolay Vasil'yevich

Wear and the reconditioning of parts of marine internal combustion engines (Izнос i vosstanovleniye detaley sudovyykh dvigately vnutrennego sgoraniya) 2d ed., rev. and enl. Moscow, Izd-vo "Transport," 1965. 132 p. illus., biblio. 4000 copies printed.

TOPIC TAGS: marine engineering, ship component diesel engine, internal combustion engine, wear resistance, metal cladding, metal deposition, metal surfacing, metal vapor deposition, chromium plating, metal plating, electrolyte, electroplating

PURPOSE AND COVERAGE: This book is intended for marine engineers in the river fleet and for personnel in steam navigation, industry, design bureaus, and planning organizations. It may also be used by students in marine engineering specialties. In this the second edition, causes and types of wear of marine machinery parts are examined. Data on wear rate and information on extreme wear and the between-repairs period of operation of internal-combustion engines are presented. Based on the author's research, basic premises for technological modernization with the aim of improving wear resistance and

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ACC NR: AM6010191

8

increasing the operating duration between repairs to ship machinery are advanced. The properties of metallic coatings of electrolytic steel, chrome, and other metals are described along with metal spraying and surfacing technology. The author acknowledges the assistance of engineers M. I. Dvorkin, B. K. Sokolov, A. I. Dem'yanov, Yu. N. Sobolev, A. G. Milling, A. A. Pasurnanskiy, and G. Yu. Vysotskiy of the Leningrad Institute of Water Transportation.

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SUB CODE: 13/ SUBM DATE: 25Aug65/ ORIG REF: 034/

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ZAPOL'SKIY, O.B.

Photooxidation of polystyrene. Vysokom. soed. 7 no.4:615-620  
Ap '65. (MIRA 18:6)

1. Belorusskiy gosudarstvennyy universitet imeni Lenina.

ZAJOL'SKIY, O.B.

Photochemical degradation of cellulose in air. Vysokom.sped. 3  
no.3:376-381 Mr '61. (MIRA 14:6)

1. Belorusskiy gosudarstvennyy universitet imeni V.I.Lenina.  
(Cellulose) (Photochemistry)

ACCESSION NR: AF5011246

UR/0190/65/007/004/0615/0420

also studied. Thin films (20  $\mu$  thick) were irradiated in air by a PHK-7 mercury lamp for the experiments. The samples were irradiated in air by a PHK-7 mercury lamp for 40 hours, with the temperature held below 30-40°C. The diacetyl was dried under vacuum, then recondensed in vacuum and held over dry ice to avoid polymerization. The benzyl was recrystallized twice. The IR absorption spectra were recorded on an IR-14 double-beam spectrometer. The spectra of irradiated samples were recorded twice: once relative to air and once relative to

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CIA-RDP86-00513R001963810016-6"

BC

Chemical composition of the [Russian] tobacco  
crops of 1927 and 1928. V. BALABUCHA-POKOVA and  
V. ZAROLSKI (U.S.S.R. State Inst. Tobacco Inv., 1930,  
Bull. 60, 62 pp.).—A large number of data for tobaccos  
grown in different parts of Russia are given.  
T. H. POPE.

ASB-36 METALLURGICAL LITERATURE CLASSIFICATION

STONY BROOK

PHASE I BOOK EXPLOITATION

SOV/5096

Bune, V. K., M. V. Gzovskiy, K. K. Zapol'skiy, V. I. Keylis-Borok,  
V. N. Krestnikov, L. N. Malinovskaya, I. L. Nersesov, G. I. Pavlova,  
T. G. Nautian, G. I. Reysner, Yu. V. Riznichenko, and V. I. Khalturin

Metody detal'nogo izucheniya seysmichnosti (Methods of Detailed Seismic Research)  
Moscow, Izd-vo AN SSSR, 1960. 327 p. No. of copies printed not given.  
(Series: Akademiya nauk SSSR. Institut fiziki zemli. Trudy, vyp. 9 [176])

Resp. Ed.: Yu. V. Riznichenko, Corresponding Member AS USSR; Ed. of Publishing  
House: S. I. Mosarskiy; Tech. Ed.: O. G. Ul'yanova

PURPOSE: This book is intended for geophysicists, particularly seismologists.

COVERAGE: The book summarizes the principal results of the work of the TKSE  
Instituta fiziki zemli AN SSSR (Tadzhik Complex Seismological Expedition  
of the Institute of Physics of the Earth of the AS USSR) and the Institut  
seysmologii AN Tadzhikskoy SSR (Institute of Seismology of the AS Tadzhik  
SSR) during the period 1955-1957. Among the topics discussed are: seismic  
apparatus used, new methods for determining the coordinates of earthquake

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Methods of Detailed Seismic Research

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foci, detailed methods for determining the structure of the earth's crust, some results of these determinations, methods of determining seismic energy on the basis of a series of criteria, analysis of dominant frequencies, the use of frequency-selective apparatus, a general description and analysis of seismic conditions in the Garm and Stalinabad areas, the geological structure of the Garm region and the history of its development, and a comparison of the spatial distribution of seismicity and the geological and tectonic structure of the area. The Foreword mentions Academician G. A. Gamburtsev [deceased] who laid the foundations for this work when he was director of the TKSE. The individual chapters of the book were written by: Introduction and Chapter 1 -- I. L. Nersesov and Yu. V. Ryznichenko; Chapter 2 -- I. L. Nersesov; Chapter 3 -- I. L. Nersesov and T. G. Rautian; Chapter 4 -- T. G. Rautian; Chapter 5 -- K. K. Zapol'skiy and V. I. Khalturin; Chapter 6 -- V. I. Keylis-Borok, L. N. Malinovskaya, G. I. Pavlova, and V. I. Khalturin; Chapter 7 -- V. I. Bune, I. L. Nersesov and Yu. V. Ryznichenko; Chapter 8 -- M. V. Gzovskiy, V. N. Krestnikov, and G. I. Reysner; Chapter 9 -- V. I. Bune, M. V. Gzovskiy and I. L. Nersesov. There are 272 references: 185 Soviet, 73 English, and 14 German.

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ZAPOL'SKIY, O.B.

Effect of ultraviolet radiation on cellulose. Dokl. AN BSSR 8 no.  
4:234-236 Ap '64. (MIRA 17:6)

1. Belorusskiy gosudarstvennyy universitet imeni Lenina. Predstavleno  
akademikom AN BSSR B.I. Stepanovym.

ZAPOL'SKIY, O.B.

Photooxidation of cellulose. Vysokom.sped. 5 no.1:68-70 Ja  
'63. (MIRA 16:1)

1. Belorusskiy gosudarstvennyy universitet im. V.I.Lenina:  
(Cellulose) (Oxidation) (Ultraviolet rays)

ZAPOL'SKIY, V., kand. arkhitektury; SEREDYUK, I., kand. arkhitektury;  
SHVETS, Ya., arkhitektor

Built-in cabinets and storage walls for apartments. 2fl.  
stroil. no.2:15-22 '64. (MIRA 18:11)

ZAPOL'SKIY, V.G. [Zapol's'kiy, V.H.], kand. arkhitekt. dots.;  
SKUBCHENKO, G.M. [Skubchenko, H.M.], inzh.-arkht.,  
dots.; BEDILO, O.T. [Bedilo, O.T.], dots., otv. red.;  
POLUBICHKO, B.V., red.

[Buildings on automobile roads] Budynky na avtomobil'nykh  
dorozhakh. L'viv. Vyd-vo L'vivs'koho univ., 1964. 155 p.  
(MIRA 18:8)

ZAPCL'SKIY, V.M., inzh.; SHABLIY, N.V., inzh.

Metal detector for highly magnetic ore. Gor.zhur. no 5:68-70 My  
'61. (MIRA 14:6)

1. Mekhanobrchermet, Krivoy Rog.  
(Crushing machinery—Safety appliances) (Metal detectors)

S/194/61/000/001/007/038  
D216/D304

AUTHOR: Zapol'skiy, V.M.

TITLE: New types of contactless probes and the results of their evaluation

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 1, 1961, 10, abstract 1 V94 (Govnyy zh., no. 2 1960, 70-72) ✓

TEXT: A description is given of contactless probes for the control of material in handling systems and in the technological processes in crushing, enriching and agglomerating plants. The capacitive probe is a 3-terminal electron tube circuit. The probe operates satisfactorily at distances between antenna and raw material of 30-40 cm. An induction probe consists of an inductance bridge and an electronic relay. The inductance coil is placed at a distance 2 - 5 cm under the conveyor belt. A vibration-type probe is used for control of raw material in lumps on feeders and chutes. The probe is operated by the vibrations of the controlled mechanism.

Card 1/2



New types of contactless probes...

S/194/61/000/001/007/038  
D216/D304

An accoustical probe works on the principle of transformation of sound energy into an electrical signal. All described probes have been treated at the Dnyepropetrovsk Coke and Chemical plant in Kalinin and their production has been undertaken by Dnyepropetrovsk Factory of Selenium Rectifiers. 4 figures

Card 2/2

ACC NR: AP6015718

(N)

SOURCE CODE: UR/0413/66/000/009/0147/0147

INVENTOR: Mogilevich, V. I.; Zapol'skiy, V. M.

ORG: None

TITLE: A marine jib crane. Class 65, No. 181508

SOURCE: Izobreteniya, promyshlennyye obratzsy, tovarnyye znaki, no. 9, 1966, 147

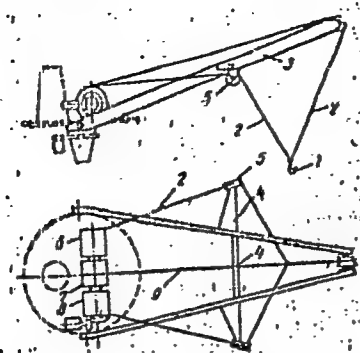
TOPIC TAGS: crane, marine equipment

ABSTRACT: This Author's Certificate introduces a marine jib crane with a hoisting winch and a single-cable load hanger with two directing cables to keep the load from swinging. Design is simplified and operation of the crane is improved by fixing a cross member on the crane arm perpendicular to its axis. Blocks are mounted at the ends of this cross member. The winch is made with three adjacent drums on a single shaft. The load cable passes over the center drum while the directing cables run through the corresponding blocks on the crosspiece and pass over the respective side drums of the hoisting winch.

Card 1/2

UDC: 629.12:621.873.127

ACC NR: AP6015718



1—load hook; 2—directing cables; 3—crane arm; 4—cross member; 5—blocks; 6-8—winch drums; 9—load cable

SUB CODE: 13/ SUBM DATE: 23Jul64

Card 2/2

AUTHOR: Zapol'skiy, V.M., Lining Engineer SOV-127-58-8-15/27

TITLE: An Automatic Regulator of the Level of the Pulp in Separators  
2VK-5 (Avtomaticheskii regul'yator urovnya pul'py v separatorakh:  
2VK-5)

PERIODICAL: Gornyy zhurnal, 1958, Nr 8, pp 65-67 (USSR)

ABSTRACT: The author describes a device which automatically regulates the inflow of water into the vats of the separator 2VK-5, when the level of the pulp falls below the permissible point. This regulator, of relay type, consists of carbon electrode fixed on the edge of the vat so that its lower end indicates the level of the pulp, a solenoid valve and a relay block which controls the valve. When the level of the pulp reaches the lower end of the electrode, the alternating current from the secondary winding of the lowering transformer passes through the chain electrode - to the full-wave selenium rectifier. The rectified current enters the winding of the relay, feeding the valve through which the water flows into the vat, as long as

Card 1/2

SOV-127-58-8-15/27

An Automatic Regulator of the Level of the Pulp in Separators 2VK-5

the level of the pulp does not reach the electrode. When the current reaches the relay, it cuts off the selenoid and the valve closes. There is 1 photo and 1 diagram.

ASSOCIATION: Mekhanobrchermet

1. Ores--Processing--Equipment

Card 2/2

ZAPOL'SKIY, V.K.

SOKOLOV, K.M. YEVSTAFEYEV, S.V.; ROSTOTSKIY, V.K.; STANKOVSKIY, A.P.;  
 VARENIK, Ye.I.; ONUFRIYEV, I.A.; SVESHNIKOV, I.P.; UKHOV, B.S.;  
 BAUMAN, V.A.; BARSOV, I.P.; BASHINSKIY, S.V.; BOYKO, A.G.; VALUTSKIY,  
 I.I.; ZAPOL'SKIY, V.P.; ZOTOV, V.P.; IVANOV, V.A.; KAZARIKOV, V.M.;  
 LEVI, S.S.; MALOLETKOV, Ye.K.; MERENKOV, A.S.; MIROPOL'SKAYA, N.K.;  
 OSIPOV, L.G.; PEREL'MAN, L.M.; PETROV, G.D.; PETROV, N.M.; POLYAKOV,  
 V.I.; VATSSLAVSKAYA, L.Ye.; VAKHRAMYEV, S.A.; VERZHITSKIY, A.M.;  
 VLASOV, P.A.; VOL'FSON, A.V.; VOSHCHININ, A.I.; DZHUNKOVSKIY, N.N.;  
 DOMBROVSKIY, N.G.; YEPIFANOV, S.P.; YEFREMEENKO, V.P.; ZELICHENOK, G.G.;  
 ZIMIN, P.A.; POPOVA, N.T.; ROGOVSKIY, L.V.; REBROV, A.S.; SAPRYKIN, V.A.;  
 SOVALOV, I.G.; SOSHIN, A.V.; STARUKHIN, N.M.; SURENYAN, G.S.; TOLORAYA,  
 D.F.; TROITSKIY, Kh.L.; TUSHIYAKOV, M.D.; FROLOV, P.T.; TSIRKUNOV, I.P.

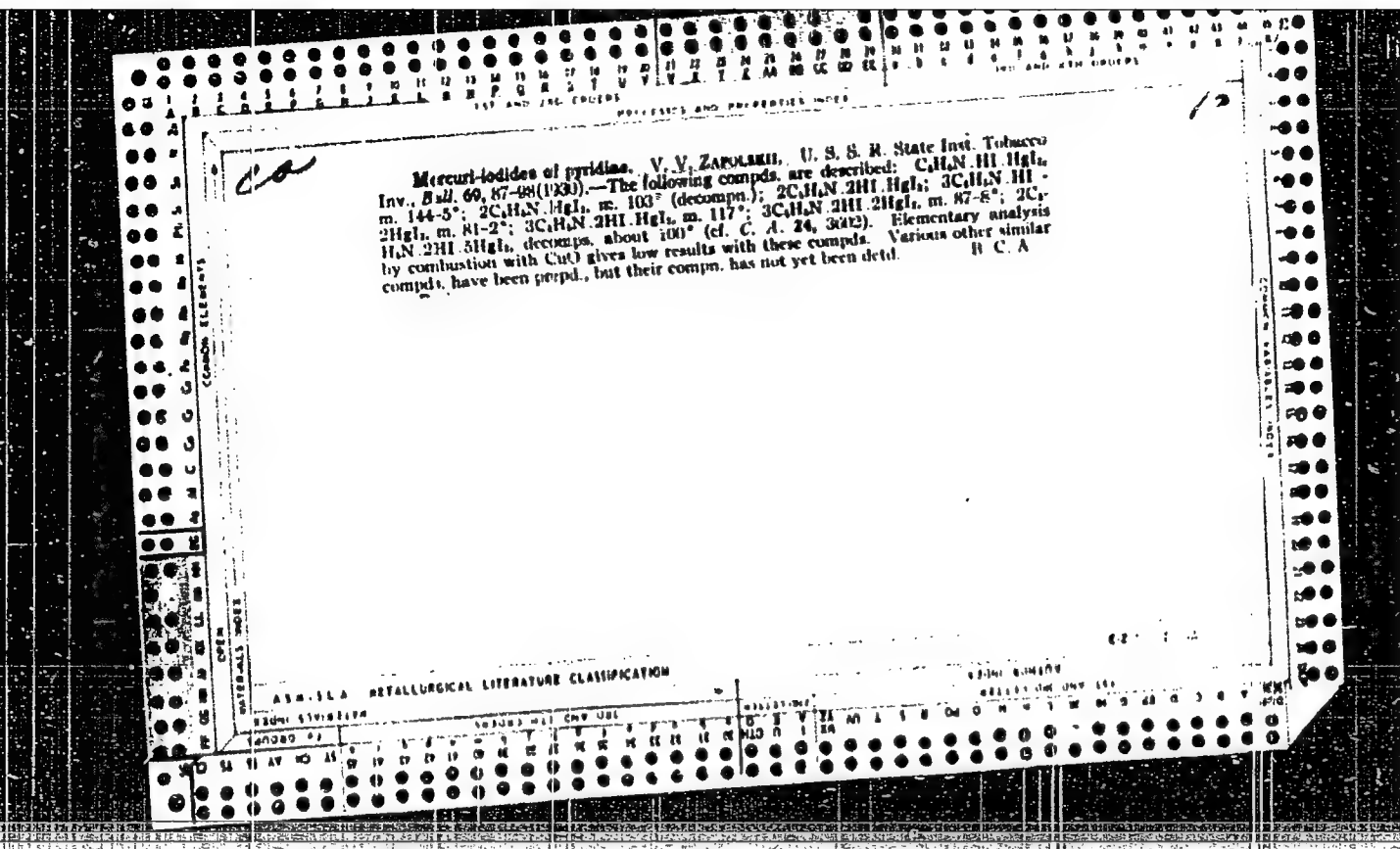
Andrei Vladimirovich Konorov; obituary. Mekh. stroi. 16 no.1:32 Ja  
 '59. (MIRA 12:1)

(Konorov, Andrei Vladimirovich, 1890-1958)

BC

Determination of nicotine as  $C_{10}H_{14}N_2 \cdot HCl$ . V. V. ZAKHARSKI (U.S.S.R. State Inst. Tobacco Invent., Bull. 53, 1926, 23 pp.).--Nicotine is precipitated from alkali carbonate solution (15 or 10% solution of potassium or sodium carbonate, respectively) by means of mercuric iodide dissolved in sodium hyposulphite, the washed precipitate reduced in alkaline solution by zinc amalgam, and the iodine determined by Volhard's method. The method is accurate in the presence of large amounts of ammonia, and of pyridine up to 0.05%.

R. Holmes.





**CA**

A quantitative separation of *crimenla* from nicotine. V.V. Zarokanil. State Inst. Tobacco Investigations (U. S. S. R.), Bull. 81, 87-92(1931).—Z. modified the Longi method in detg. NH<sub>3</sub> in the presence of nicotine. Hgl, was used in the train in the process of distn. It is placed in a tube with glass wool as shown in the diagram in the original. A solid compd. of nicotine forms with the Hgl; and the NH<sub>3</sub> is thus freely titrated in the distillate.

J. S. Jorrek

ASM-SLA METALLURGICAL LITERATURE CLASSIFICATION

[illegible]

**CA**

Nicotinic sulfate. V. V. Zappalinskii. Russ. Zh. Khim., Apr.  
30, 1963. The steam-said nicotine is treated with solid  
 $HgI_2$  and then with  $H_2SO_4$ .

**ASD-SLA METALLURGICAL LITERATURE CLASSIFICATION**

DUPLIK, Z. K. (Krivoy Rog, pos. Chkalova, ul. Nakhimova, d. 83);  
ZAPOL'SKIY, V. V.

Treatment of thrombosis of the mesenteric vessels. Nov. khir.  
arkh. no.3:26-30 '62. (MIRA 15:4)

1. Po materialam khirurgicheskogo otdeleniya (zav. - zasl. vrach  
UkrSSR A. Ye. Cheban) 1-y Krivorozhskoy gorodskoy bol'nitsy.

(MESENTERY—BLOOD SUPPLY) (THROMBOSIS)



ZAPOL'SKIKH, M.Z.

Precision and high-speed universal attachments for small-scale production. [Iss] LONITOMASH 24:305-325 '51.

(MIRA 8:2)

1. Mashinostroitel'nyy zavod.

(Machine tools--Accessories and attachments)

ZAPOL'SKIKH, M. Z.

USSR/Engineering - Machine tools

Card : 1/1

Authors : Zapol'skikh, M. Z.

Title : Reversible pneumatic - jigs

Periodical : Stan. i Instr., Ed. 7, 33 - 34, July 1954

Abstract : General information is given on reversible pneumatic-jigs used on milling machines. The jigs are used for a serial production of small components; however, they can also be used for various rigging operations. Operation and structure of jigs, is described. Drawings.

Institution : ....

Submitted : ....

ZAPOL'SKIY, G.

Flights into regions contaminated by an atomic blast. Kryl.rod.  
8 no.3:24 Mr '57. (MLRA 10:5)  
(Atomic warfare) (Airplanes--Piloting)



ZAPOL'SKIY, I.A.; SITO, I.F.

Unwinding the cocoons of a pernyi silkworm. Tekst.prom. 17 no.2:  
63-64 F '57. (MLBA 10:2)

1. Starshiy inzhener-tekhnolog Kiyevskogo melkovogo kombinata (for Zapol'skiy). 2. Nachal'nik planovogo otдела Kiyevskogo melkovogo kombinata (for Sito).  
(Silk manufacture)

60-29-1/14  
AUTHORS: Zapol'skiy, K.I., Gal'perin, Ye.I., Borisevich, Ye. S.  
TITLE: Mobile Experimental Low-frequency Seismic Stations  
(Opytnaya peredvizhnaya nizkochastotnaya seysmicheskaya  
stantsiya)  
PERIODICAL: Trudy Geofizicheskogo instituta AN SSSR, 1955, Nr 29,  
pp. 3-10 (USSR)  
ABSTRACT: The authors describe apparatus developed to investigate  
multichannel registration of near earthquakes in the frequency  
range of 1-25 cps. The station consists of a low-frequency, 12-  
channel seismic unit "O/HC" mounted on a "TAZ-51" truck. Each  
channel consists of a seismograph, an amplifier and a galvanom-  
eter. The general characteristics of the filter-amplifier sys-  
tems and auxiliary measuring and registering instruments are  
described in detail. Field experiments conducted in 1950 in the  
area of northern Tien Shan demonstrated the effectiveness of  
these stations. The station may also be used to register explor-  
atory explosions. There are 7 figures and 4 references of which  
3 are USSR and 1 English.  
AVAILABLE: Library of Congress  
Card 1/1.

ZAFOL'SKIY, N. V.

33407 Sroki Sluzhby Tsilindrovoy Vtulki Dvigatelya Vnutrennego Sgoraniya I  
Tsilindra Parovoy Mashiny. Trudy Tsentr. Nauch.-Issled. In-ta Rech. Flota,  
Vyp. 4, 1949, c. 52-62

SO: Letopis' Zhurnal'nykh Statey, Vol. 45, Moskva, 1949

ZAPOL'SKIY, N. V., kandidat tekhnicheskikh nauk; BELENOVSKIY, P. N.,  
inghener.

Results of laboratory investigation on the wear resistance of  
cast iron ship machinery parts. Trudy TSNIIRF no.28:73-92 '54.  
(MLRA 9:1)

(Cast iron--Testing) (Mechanical wear)

ZAPOL'SKIY, M.V.

"PK-2 and PK-2 m, electric caterpillar crane." P.I. Il'in, S.Kh. Kheifets. Reviewed by M.V. Zapol'skii. Torf.prom. 31 no. 7:30 '54.

(MLRA 7:11)

(Cranes, derricks, etc.) (Il'in, P.I.) (Kheifets, S.Kh.)

ZAPOL'SKIY, M.V.; SAFRONOV, D.I.; SPITSIN, M.Ye.

The casting of steel parts without shrink head. Torf.prom.32  
no.4:15-17 '55. (MLRA 8:10)

1. Ivtorfmash.  
(Steel casting) (Peat machinery)

KAFOLO'SKIT, M. V.

Caterpillars (Vehicles)

"Improving technical maintenance of chain drives of excavators TE-2 and Te-2M." Torf. prom. 29 no. 7, 1952.

Monthly List of Russian Accessions Library of Congress October 1952. UNCLASSIFIED.

ZAPOL'SKIKH, M.Z.

Revisable pneumatic vises. Stan. 1 instr. 25 no.7:33-34 J1 '54.  
(Pneumatic tools) (MLRA 7:8)



*ZAPOL'SKIY, N.V.*

ZAPOL'SKIY, N.V., kandidat tekhnicheskikh nauk

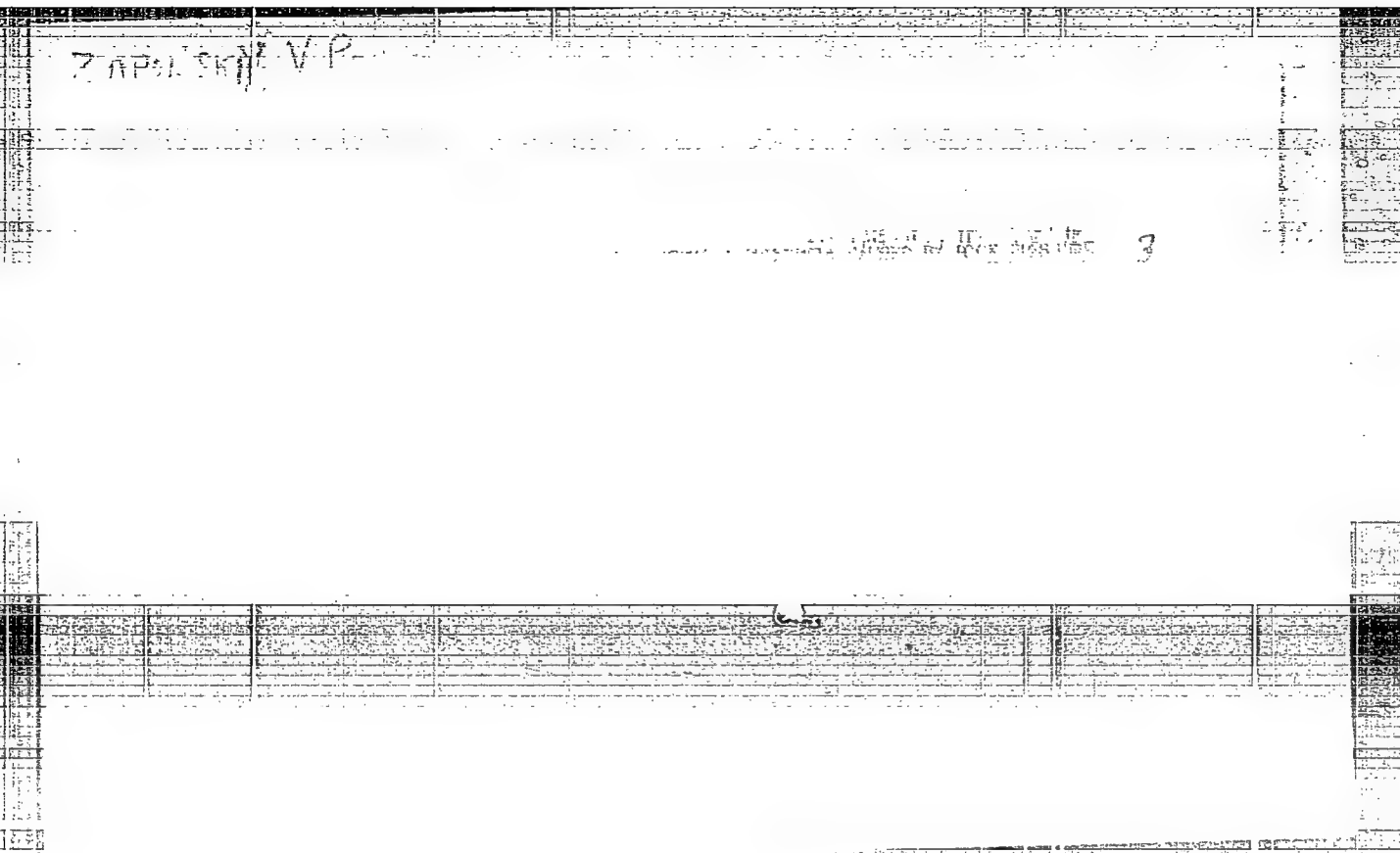
Organizing ship repairs based on new principles. Rech.transp.14 no.8:  
6-9 Ag '55. (MIRA 8:11)

(Ships--Maintenance and repairs)

ZAROL'SKIY, V.P., inzhener.

Package transport of building materials. Mekh.stroi.4 no.3:  
1-3 Mr '47. (MLRA 9:2)

1.Vsesoyuznyy nauchno-issledovatel'skiy institut po organizatsii  
i mekhanizatsii stroitel'stva.  
(Bricks--Transportation) (Cranes, derricks, etc.)



ZAPOLSKIY, V.F., RIVKIN, I.D.

Mining Engineering

Pressure of caved-in rock on ore deposits. Gor. zhur. No. 2, 1952

Monthly List of Russian Accessions, Library of Congress, April, 1952 Unclassified

RIVKIN, Isaak Davydovich; ZAPOL'SKIY, Vyacheslav Petrovich; BOGDANOV,  
Petr Andreyevich; SHOSTAK, A.G., redaktor; PARTSEVSKIY, B.N.,  
redaktor izdatel'stva; PETROVA, N.S., tekhnicheskii redaktor

[Sound measuring method of observing manifestations of mine pressure  
in the workings of the Krivoy Rog Basin] Zvukometricheskii metod  
nabliudeniia proiavlenii gornogo davleniia na shakhtakh Krivorozh-  
skogo basseina. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi  
i tsvetnoi metallurgii. 1956. 188 p. (MIRA 9:8)

(Krivoy Rog--Subsidence (Earth movements))  
(Mining engineering)

ZAPOLYANSKIY, Ya.S., inzhener.

Efficient marking of electric incandescent lamps. Svetotekhnika 2 no.4:  
28-29 J1 '56. (MIRA 9:10)

1. Elektrolampovyy zavod.

(Electric lamps, Incandescent)

ZAPOLYANSKIY, Ya.S.

AUTHOR: Zapolyanskiy, Ya.S. Engineer

28-58-2-26/41

TITLE: Ways of Increasing the Efficiency of Electric Light Bulbs  
(Puti povysheniya ekonomichnosti osvetitel'nykh elektrolamp)

PERIODICAL: Standartizatsiya, 1958, Nr 2, pp 58-60 (USSR)

ABSTRACT: Basic standardization principles for common electric lighting bulbs are discussed in connection with the standard project planned for 1958. The reasoning is based on a study of the existing Soviet standard "GOST 2239-54", the standards of other countries, and the data of the Tomsk Electric Bulb Plant. It is suggested to introduce standard bulb characteristics (tables 1,2 and 3) for multi-spiral bulbs, bi-spiral argon bulbs, and by-spiral krypton bulbs; to build the system of types and sizes on the lumen scale ( and not on the current consumption in watts, as before); to include into the the new standard, recommendations for the application of different bulb types. There are 3 tables and 1 figure.

ASSOCIATION: Tomskiy elektrolampovyy zavod (Tomsk Electric Bulb Plant)

AVAILABLE: Library of Congress

Card 1/1 1. Incandescent Lamps-Standards 2. Standardization-USSR

SOV/112-57-5-10679

Translation from: Referativnyy zhurnal. Elektrotehnika, 1957, Nr 5, p 158 (USSR)

AUTHOR: Zapolyanskiy, Ya. S.

TITLE: Light and Acoustic Signaling of Soft-Gasholder Fill (Svetovaya i zvukovaya signalizatsiya o stepeni napolneniya myagkikh gasgol'derov)

PERIODICAL: Obmen opytom. M-vo radiotekhn. prom-sti SSSR, 1955,  
Nr 8-9, pp 58-61

ABSTRACT: Bibliographic entry.

Card 1/1



ZAPOLYANSKIY, Ya.S.

Translation from: Referativnyy Zhurnal, Elektrotehnika, 1957, 112-2-4176  
Nr 2, p.234 (USSR)

AUTHOR: Zapolyanskiy, Ya.S.

TITLE: A New System for Cooling Lamps at the Automatic  
Evacuation Units before Filling them with Argon (Novaya  
sistema okhlazhdeniya lamp na otkachnykh avtomatakh  
pered napolneniyem argonom)

PERIODICAL: Inform. tekhn. M-vo radiotekhn. prom-sti SSSR, 1955,  
Nr 7, pp.29-31

ABSTRACT: Bibliographic entry.

Card 1/1

ZAPOLYANSKIY, Ya.S., inzh.

Increasing the economic efficiency of electric lamps. Standartizatsia  
22 no.2:58-60 Mr-Ap '58. (MIRA 11:5)

1.Tomskiy elektrolampovyy zavod.  
(Electric lamps)

ZAPOLYANSKIY, Ya.S.

Semiautomatic machine for silvering Christmas tree ornaments.

Stek.1 ker. 14 no.6:21-22 Je '57.

(MIRA 10:7)

(Glass, Ornamental) (Machinery, Automatic)

ZAPOLYANSKIY, Ya.S.

Non-freezing water pump. Vod.i san.tekh. no.2:32-34 Y '56.  
(Pumping machinery) (MLRA 9:6)

BABADZHAN, A.A.; ZHUKOVSKIY, V.M.; ZAPONOVA, K.F.; VETRENKO, Ye.A.

Kinetics of volatilizing zinc, lead, and certain rare elements during  
the treatment of metallurgical dusts by the pyroselection method. TSvet.  
mat. 36 no.11:20-22 N '63. (MIRA 17:1)

GALIMOV, M.D.; KIRK, L.D.; STEPIN, B.V.; ZAPONOVA, K.F.

Behavior of arsenic and rare elements during the oxidizing  
roasting and sulfatization of dusts and sublimates. TSvet.  
met. 34 no.12:61-67 D '61. (MIRA 14:12)

(Copper industry--By-products)  
(Fly ash)

KALITSUN, V.I., inzh.; ZAPORNIKOV, V.P., inzh.

Construction of horizontal sand traps. Vod. i san. tekhn. no.9:22-26  
S '63. (MIRA 17:2)

17

Processes and Properties Index

Fermentation of Roumanian tobacco. I. Nitrogenous substances. 1. Zaporozhan, Bul. cult-din fermentarii Tutunului 26, 379-437 (1957) French, 454 (1957) (1957). -- Kupta, on the N metabolism of 18 Roumanian tobacco varieties show that the albuminoid substances in general undergo no abs. quant. modification in the course of fermentation. Nitrogenous substances undergo changes in such of their constituents as are sol. in boiling H<sub>2</sub>O; this is shown by the accumulation of NH<sub>3</sub> originating in the amino acids and amides. The decompn. of nicotine is very much reduced, owing probably to the previous processes of searing and drying and to the feeble activity of the sp. oxidizing enzymes. Migrations of sol. N from the margin to the center nerve were observed, especially for nicotine. The dry substance is generally enriched in all forms of N, but, with the exception of NH<sub>3</sub> and albuminoid substances, these increases are too small to be of practical importance. A. H. Krone

ASD-11A METALLURGICAL LITERATURE CLASSIFICATION



**COMMON ELEMENTS**

**OPEN MATERIALS INDEX**

**PROJECTING OF TOBACCO. II. I. VLADISCU AND I. ZAPOROJANU.** *Rui. cultidrii fermentarii Tutunului* 26, 64-78 (in French) (in German 70-63) (1937); cf. C. A. 31, 4133.—For the tobacco stalk the relation of percentage of N detd. by Mohr's method to that detd. by Barnstein's method is between 85 and 98. During the growth of the plant there are 2 maxima and 2 minima; the first minimum appears at the moment of inflorescence, the second minimum during the period of drying of the capsule. The appearance of these minima is due to migration of substances from the stalk to the flower. In the last period after maturation of top leaves these substances go back to the stalk. In the roots, the relation percentage of N detd. by Mohr's method to that detd. by Barnstein's method is between 91 and 94, and increases continuously; this relation in beheaded tobacco is between 85 and 95, in nonbeheaded tobacco between 85 and 90.  
E. S. G. B.

**ASH-1-A METALLURGICAL LITERATURE CLASSIFICATION**

**NOV 1971**

1ST AND 2ND PROPERTIES										3RD AND 4TH PROPERTIES									
PROCESSES AND PROPERTIES INDEX																			
<p>The fermentation of Rumanian tobacco, II. Medu-            lag (substance). <i>Bul. cultidati ferment-</i>  <i>arii Tutunului</i> 20, 49-55 (in French, 87-91) (1940); cf.  <i>C. A.</i> 34, 2130'.—The total reducing substances (i. e.,            including those precipitable by Pb acetate) were extd. by            the methods of A. Schmuck and of Bertrand and expressed            as glucose. The results are tabulated for 3 qualities of 3            Rumanian varieties (Satmarean, 1930, Molovata, II B,            1930 and Molovata, 1937). It is shown that slow fer-            mentation at low temps. serves to conserve the initial            color and chem. compn. of the tobacco, i. e., chiefly, to            destroy their capacity for O absorption from the air. 30            references. A. H. Krappe.</p>																			
ASIS-ALA DETALLURGICAL LITERATURE CLASSIFICATION																			
FROM DIVISION										TO DIVISION									
TERMS										TERMS									

LIST AND LOC. INDEX										PROCESS AND PROPERTIES INDEX										THE ANALYST INDEX									
BC										B-II-2																			
<p>Determination of the moisture content of tobacco. I. Vlasov and I. Zorogovny (Bul. cult. ferment. Tsinnsul, 1935, 24, 67-86; Chem. Zentr., 1935, ii, 1637).—Various methods are compared. Drying for 3 hr. at 95° in an electric oven or distillation with Ph<sub>3</sub>AsCl<sub>2</sub> is recommended. For samples containing 10-18% of H<sub>2</sub>O; drying at 110° for 30 min. give similar results. A. G. P.</p>																													
<p>456.514 METALLURGICAL LITERATURE CLASSIFICATION</p>																													
FROM STEINBLUM										RECORD W/IT ONLY GIN										EXTRACT ONE									
14 15 16 17 18 19 20 21 22 23										24 25 26 27 28 29 30 31 32 33										34 35 36 37 38 39 40 41 42 43									

BC

U-4

Protein in tobacco. Baranstein and Mohr's methods. I-III.

I. Vildeanu and I. Zaporozhny (Bul. Cult. Form. Tulunului, 1934, 24, 244-246; 1937, 24, 44-45; 1938, 27, 186-188; Cism. Zeist., 1937, II, 1241-1243, 2762; 1938, II, 2871).--I. When applied to tobacco Baranstein's method gives higher protein content val. than Mohr's method. The ratio (r %) of the two val. is 84-90 in seeds, 70-84 in improved tobacco, 62-69 in the leaf at the commencement of vegetation, 63-67 in the ripening leaf, and 66-69 and 94-98 in the course of propagation during bud formation and drying of the seeds, respectively. The ratio of protein-N by either method to total N increases with the quality of the tobacco.

II. During growth r in the stem (82-86) passes through two max. and two min.; the min. being at inflorescence and during drying of the capsule. In the root r (81-84) is greatest at the beginning and end of vegetation. The distribution of protein-N in the leaves and its relation to the total N content is further discussed.

III. N compounds which cause the r variation accumulate in the leaves during ripening and fading; they are of the polypeptide or purine type, and their accumulation is closely related to protein metabolism in the plant.

A. J. E. W.

150-15A METALLURGICAL LITERATURE CLASSIFICATION

150-15A METALLURGICAL LITERATURE CLASSIFICATION									
150-15A METALLURGICAL LITERATURE CLASSIFICATION									
150	151	152	153	154	155	156	157	158	159
150	151	152	153	154	155	156	157	158	159

CA

7

Methods for estimating total nitrogen, and their application to tobacco. 1. Vlackseu and J. Zaporotany. *Rul. cultivarii fermentarii tutunului* 22, 370-390 in French 391-5 (1933).—The Forster, Juddbauer, Gunning-Atterberg, Burgevin, Willarth, Willarth-Botcher and Arnold methods for total N were comparatively tested on low-grade tobacco, pure nicotine and  $KNO_3$ . The Forster method (*Chem. Ztg.* 13, 229; 14, 1673; 23, 197) showed the max. percentage of N, the other methods failed to reduce nitric or nicotine N completely. The Gunning-Atterberg method is next best, but should be used only on tobaccos poor in N. O. W. Wilcox

ASTM-SLA METALLURGICAL LITERATURE CLASSIFICATION

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ZAPOROMETOV, M.N.

Place of catechin synthesis in the tea plant [with summary in English].  
Fiziol. rast. 5 no.1:51-61 Ja-F '58. (MIRA 11:1)

1. Institut fiziologii rasteniy im. K.A. Timiryazeva AN SSSR, Moskva.  
(Tea) (Catechol)

ZAPOROSHCHENKO, S.

"Navigational Control in an Itinerary Flight," Kryl. Rod., No.9, 1953

Summary of article D 221454, 29 Apr 55

ZAPORISHCHENKO, S.

Aerial navigation of a determined course. Kryl.rod. 4 no.9:8-9 S '53.  
(MIRA 6:8)  
(Navigation (Aeronautics))



ZAP(ROSHCHENKO, Stepan Kirillovich; LIPOVKA, L.F., red.; GRIGOR'YEVA, A.I.,  
red.; KARYAKINA, M.S., tekhn. red.

[Aeronavigation; a handbook for aviation clubs] Samoletovozhdenie;  
posobie dlia aeroklubov. Moskva, Izd-vo DOSAAF, 1957. 199 p.  
(Navigation (Aeronautics)) (MIRA 11:7)

Aircraft Navigation (Cont.)

SOV/2427

operations which the pilot has to perform on the ground during the period of preparing for flight, as well as the in-flight means and methods for successfully accomplishing flights with a prescribed itinerary. Both sections deal primarily with elementary means of air navigation, that is, air navigation by compass and landmarks with simultaneous use of a flight map. Radio aids to air navigation are discussed only to a limited extent. A brief description is given of the RPK-10 radiocompass used in conjunction with homing or broadcasting stations.

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PHASE I BOOK EXPLOITATION

466

Zaporoshchenko, Stepan Kirillovich

- Samoletovozhdeniye; posobiye dlya aeroklubov (Air Navigation; a Handbook for Flying Clubs) Moscow, Izd-vo DOSAAF, 1957. 199 p. 7,000 copies printed.

Eds.: Lipovka, L.F. and Grigor'yeva, A.I.; Tech. Ed.: Karyakina, M.S.

PURPOSE: This book is a handbook for beginning student-pilots in flight-training organizations of the DOSAAF (All-Union Voluntary Society for the Promotion of the Army, Aviation, and Navy).

COVERAGE: The author describes in simple language the theory and practice of air navigation necessary to prepare future pilots for intelligent performance of day flights with a prescribed itinerary under simple meteorological conditions. Part I describes the means and methods by which cross-country flight is carried out. Part II describes their practical application in

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the air as well as the sequence of preflight operations which the pilot must perform. The content of both parts covers only the general means of air navigation, i.e., air navigation by compass and ground orientation with the use of flight maps. Considerable space is given to navigational and piloting equipment and to flight safety. Radio navigational aids are explained only to a limited extent. A brief account is given of the use of the radio-compass (RPK-10) for flight with reference to a homing station or broadcast station. The book contains 218 figures and 7 tables. There are no references. No personalities are mentioned.

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